

Relay Module - RIF-RPT-LDP-24DC/2X2/2X1/AU/FG



1148699

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Relay module with Push-in connection, consisting of: relay base with status LED, freewheeling diode and retaining bracket, safety relay with force-guided contacts in accordance with DIN EN 61810-3, contact type: 2 N/O contacts and 2 N/C contacts, input voltage: 24 V DC

Technical Data

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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Product properties

Operating mode	100% operating factor
Mechanical service life	approx. 10^7 cycles
B _{10d}	810000 Cycles (AC15, 250 V / 0.5 A, 1 NO)
	170000 Cycles (AC15; 250 V / 2 A; 1 NO)
	318000 Cycles (DC13, 24 V / 1 A, 1 NO)
	208000 Cycles (DC13, 24 V / 2 A, 1 NO)

Insulation characteristics

Overvoltage category	III
Pollution degree	2
Insulation	Basic insulation Safe isolation, reinforced insulation and 6 kV between coil and contact circuit and between contacts 11-12 and 13-14, 41-42 to 23-24, 33-34

Electrical properties

Test voltage	4 kV _{rms} (50 Hz, 1 min., winding/contact)
Test voltage	1.5 kV _{rms} (50 Hz, 1 min., open contact)
Test voltage	2.5 kV _{rms} (50 Hz, 1 min., between contacts: 7, 8 to 9, 10)
Test voltage	4 kV _{rms} (50 Hz, 1 min., between contacts: all others)
Rated insulation voltage	250 V AC
Rated surge voltage	4 kV

Input data

Coil side

Nominal input voltage U _N	24 V DC
Input voltage range in reference to U _N	See derating diagram
Typical input current at U _N	17 mA
Input power dissipation for U _N	0.4 W
Typical response time	10 ms
Typical release time	15 ms
Coil voltage	24 V DC
Protective circuit	Damping diode
Status display	Yellow LED

Output data

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Switching

Contact type	2 N/O contacts, 2 N/C contacts
Type of switch contact	Single contact
Drive and function	monostable
Contact material	AgSnO ₂ , hard gold-plated
Maximum switching voltage	250 V AC 300 V DC
Minimum switching voltage	10 V (5 mA)
Limiting continuous current	6 A
Maximum inrush current	35 A (20 ms)
Min. switching current	5 mA (10 V)
Interrupting rating (ohmic load) max.	144 W (24 V DC) 100 W (48 V DC) 75 W (60 V DC) 55 W (110 V DC) 50 W (220 V DC) 1500 VA (250 V AC)
Switching capacity	2 A (24 V, DC13) 3 A (230 V, AC15)
Force-guided contacts in accordance with EN 61810-3	Type A

Connection data

Coil side

Connection method	Push-in connection
Stripping length	8 mm
Conductor cross section solid	0.14 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.14 mm ² ... 1.5 mm ² 0.14 mm ² ... 1.5 mm ² (Ferrule with plastic sleeve) 0.14 mm ² ... 1 mm ² (Ferrule with plastic sleeve, two conductors on double terminal block)
Conductor cross section AWG	26 ... 16 (solid) 26 ... 16 (flexible)

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Dimensions

Width	21 mm
Height	96 mm
Depth	67 mm

Material specifications

Flammability rating according to UL 94	V2 (Housing)
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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20 (Relay base)
	RT II (Relay)
	IP54 (Installation location)
Ambient temperature (operation)	-40 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m

Standards and regulations

Air clearances and creepage distances between the power circuits

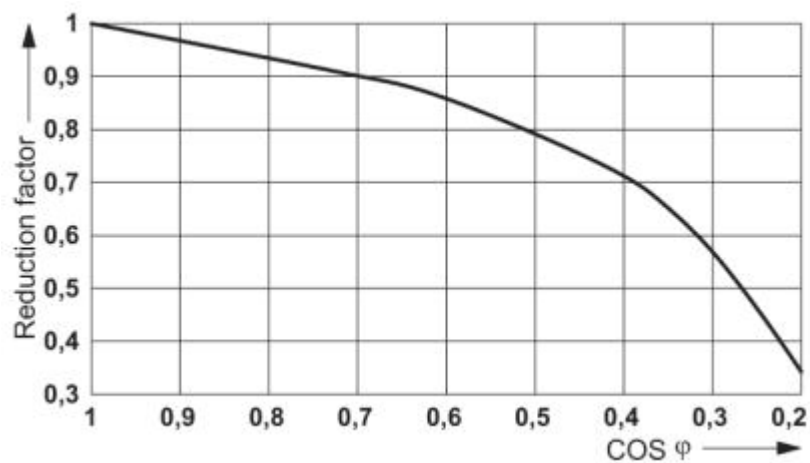
Standards/regulations	DIN EN 50178
	EN 61810-1

Mounting

Mounting type	DIN rail mounting
Assembly instructions	in rows with zero spacing
Mounting position	any

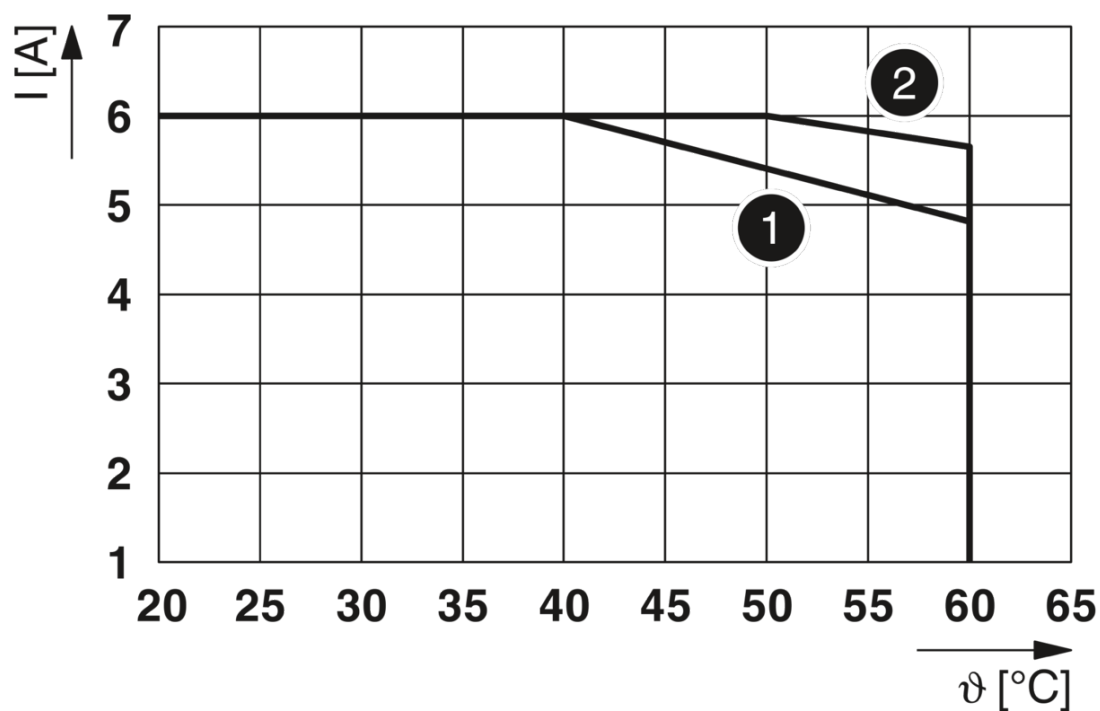
Drawings

Diagram



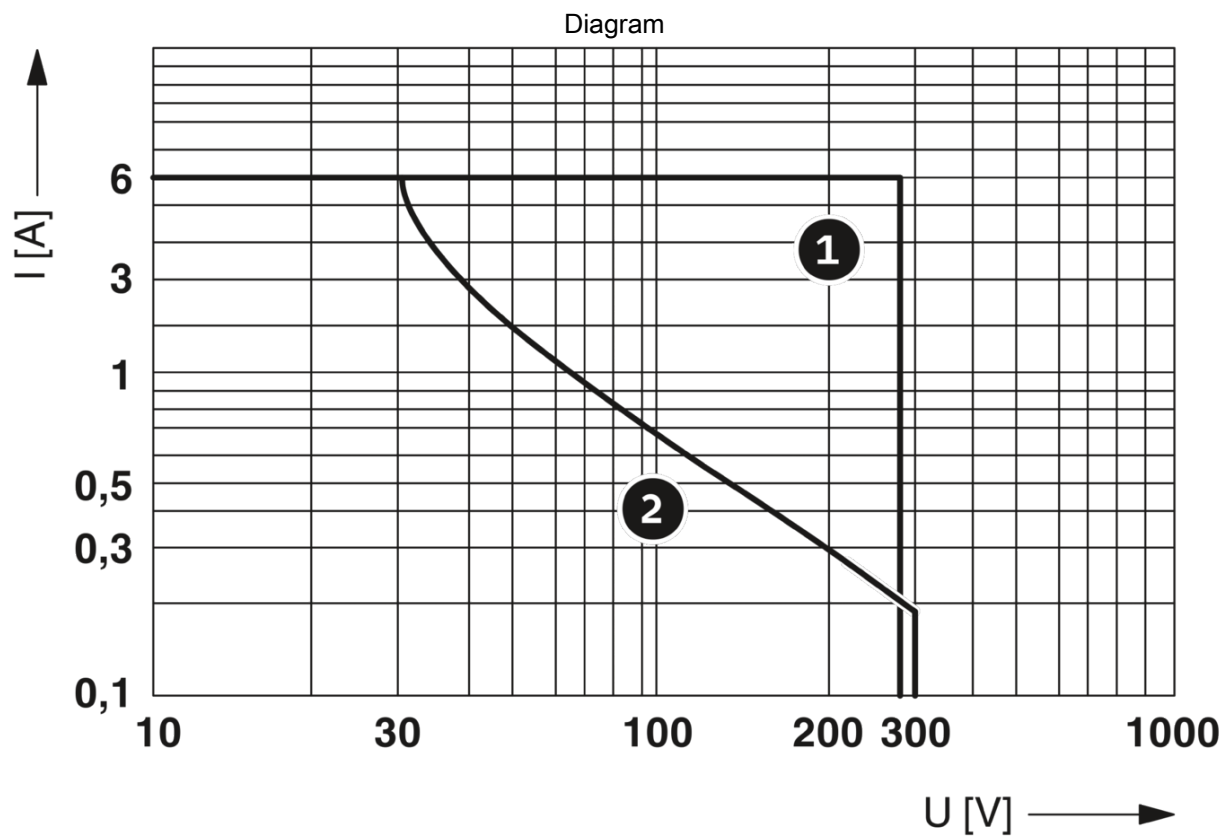
Service life reduction factor with various cos phi

Diagram



Contact derating

- ☐ Aligned without clearance, nominal input voltage $1.1 \times U_N$
- ☐ Clearance ≥ 50 mm, nominal input voltage $1.0 \times U_N$



Interrupting rating

Curve 1: AC, ohmic load

Curve 2: DC, ohmic load

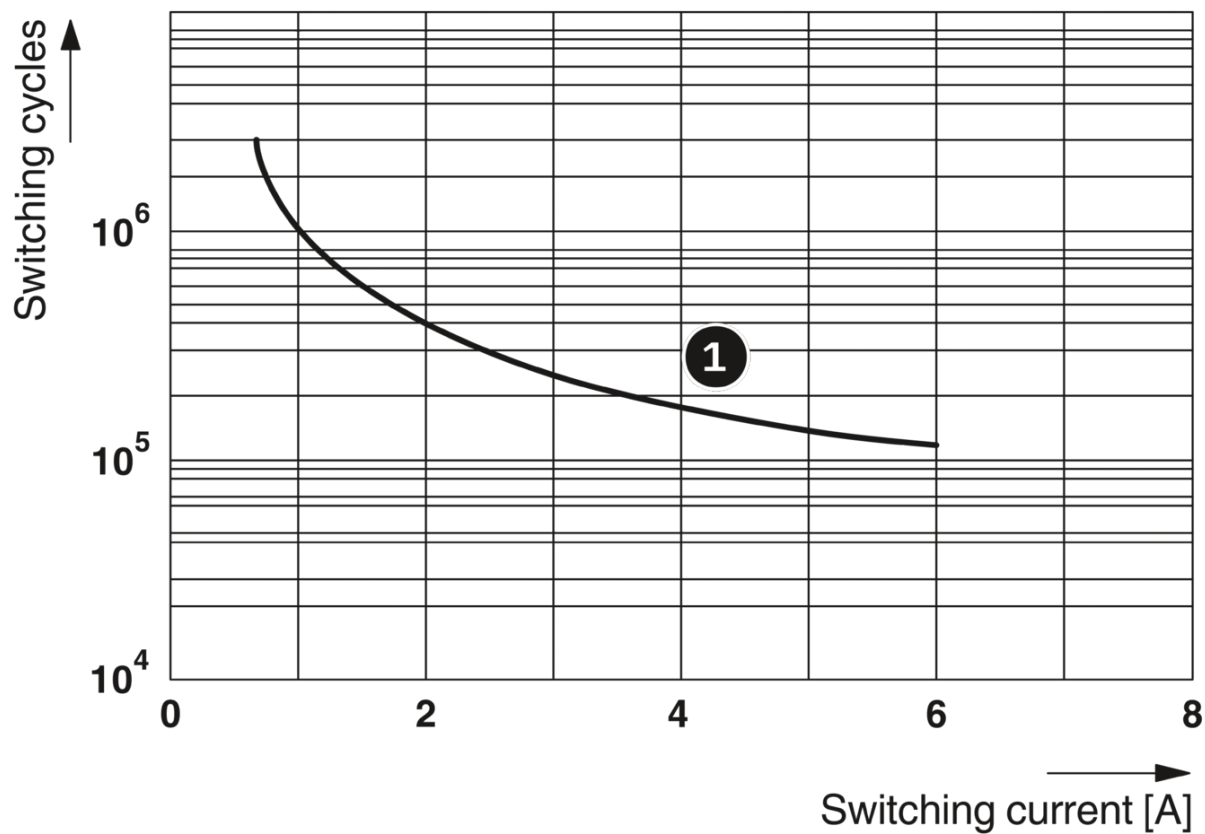
Diagram



Curve A: maximum continuous voltage at limiting continuous current

Curve B: minimum pick-up voltage for pre-excitation with U_N and limiting continuous current

Diagram



① 250 V AC, Ohmic load

Electrical service life

Circuit diagram

